TECHNICAL REVIEW DOCUMENT
For
RENEWAL OF OPERATING PERMIT 95OPBA029

Colorado Interstate Gas Company – Flank Compressor Station
Baca County
Source ID 0090001

Prepared by Jacqueline Joyce
January and April 2004
Revised July 2005
Revised October 2005 based on information submitted after the Public Comment Period.

I. Purpose

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed operating permit proposed for this site. The original Operating Permit was issued October 1, 1998. The expiration date for the permit was October 1, 2003. However, since a timely and complete renewal application was submitted, under Colorado Regulation No. 3, Part C, Section IV.C all of the terms and conditions of the existing permit shall not expire until the renewal operating permit is issued and any previously extended permit shield continues in full force and operation. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted July 2, 2002, additional technical information submitted May 3 and June 15, 2001, November 20, 2002, April 21, 2003, May 5, 2004 and October 4, 17 and 18, 2005, comments on the draft permit and technical review document received August 2, 2004, previous inspection reports and various e-mail correspondence, as well as telephone conversations with the applicant. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at http://www.cdphe.state.co.us/ap/Titlev.html.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Source

The facility is a natural gas compression facility as defined under Standard Industrial Classification 4922. Natural gas is injected into the Flank Storage Field in the summer and is withdrawn during the winter season. After withdrawal, the gas is dehydrated by triethylene glycol dehydrators on site and then pumped into the main line for market using natural gas fueled internal combustion engine driven compressors.

The significant emission units at this facility include five (5) internal combustion engines and four (4) triethylene glycol dehydrators. Non-selective catalytic reduction units (NSCR) were installed on three of these engines in December 2003 and the existing condenser on one of the dehydrators was replaced with a glycol-cooled condenser in January 2002.

Except for the control equipment changes discussed above, based on the information available to the Division and provided by the applicant, it appears that no modifications to these emission units has occurred since the original issuance of the operating permit.

This facility is located approximately 16 miles south of Stonington in Baca County, in an area designated as attainment for all criteria pollutants.

The facility is located within 50 miles of Oklahoma and Kansas. There are no federal class I areas within 100 km of this facility.

Condensate Storage Tanks and Condensate Loading Equipment

Revisions were made to Colorado Regulation No. 3 regarding condensate storage tanks and condensate truck loading equipment and those revisions took effect on December 30, 2002. Previously, under Regulation No. 3, certain size condensate storage tanks and condensate truck loading equipment meeting a specified throughput limit were exempt from APEN reporting and permitting requirements and were considered insignificant activities for Title V operating permit purposes. With the revisions to Colorado Regulation No. 3, only condensate storage tanks and condensate truck loading equipment at exploration and production (E & P) sites, meeting specified throughput limits are APEN exempt and insignificant activities. Appendix A of the permit identifies condensate tanks, however, no APEN was submitted. The source submitted information on October 4, 2005 indicating that emissions from the condensate tank are below APEN de minimis levels; therefore, the condensate tanks and condensate loading equipment can still be considered insignificant activities.

MACT Requirements

Oil and Natural Gas Production (ONGP) and Natural Gas Transmission and Storage (NGTS) Facilities MACTs (40 CFR Part 63 Subparts HH and HHH)

ONGP MACT

In their comments on the draft permit received on August 2, 2004, the source indicated that the Flank facility consists of equipment that falls under the both the provisions of the ONGP and NGTS MACTs. This information indicated that the field dehydrator (S009) and engine E001 (S001) are used to gather the casing head gas off the oil producing wells in the Flank field. Since this activity involves the gathering of field natural gas, these units are potentially subject to the ONGP MACT (40 CFR Part 63 Subpart HH). As specified in under the definition of facility in § 63.761, only equipment that qualifies under the ONGP MACT is aggregated to determine if the facility is a major source for HAPS. Based on the GLYCalc run used to set the permit limits for the dehydrator, HAP emissions from both units together are below the major source level; therefore, the requirements in Subpart HH do not apply to the facility (S001 and S009).

NGTS MACT

The source did not submit an initial notification for the provisions in 40 CFR Part 63 Subpart HHH (NGTS MACT), therefore the Division presumes that this source is not a major source for HAPS for this MACT. The provisions in 40 CFR Part 63 Subpart HHH, allow HAP emissions from glycol dehydrators to be based on the "maximum" annual natural gas throughput rate, rather than design rate or permitted emissions. Since information in the Division's files indicates that actual HAP emissions are much lower than permitted levels, the Division believes the source has based their MACT applicability on the "maximum" natural gas throughput rate, rather than design rate. In their comments on the draft permit received on August 2, 2004, the source indicated that they had in fact based emissions on the "maximum" natural gas throughput rate. The information submitted indicated that they believed the facility was a minor source for HAPS, but details of the analysis (i.e. GLYCalc runs) were not provided.

The source submitted their GLYCalc runs that were used to determine their MACT source status and supporting information on October 4 and 18, 2005. The source utilized the calculation method in the NGTS MACT (§ 63.1270(a)(1) for storage facilities to calculate the maximum natural gas throughput rate. Based on these calculations, the maximum annual natural gas throughput rate is 22,674.26 mmSCF/yr with calculated maximum hours of operation for the dehydrators at 3,318.2 hours. The maximum natural gas throughput rate is based on the maximum withdrawal rate and the maximum (calculated) glycol dehydrator hours of operation. The maximum hours of operation for the glycol dehydrators is based on the number of cycles (injection and withdrawal) that can occur in a year. The GLYCalc runs were then conducted based on the design rate of the units, in mmSCF/day, the maximum glycol circulation rate and permitted hours of

operation for the dehydrators (2,800 hrs/yr for S008 and 3,600 hrs/yr for S006 and S007. The Division accepts the use of those parameters. The wet gas composition was based on an extended gas analysis taken at the time the source performed their MACT assessment and is consistent with the requirements in § 63.1270(a)(4), which specifies that the maximum or average values of other parameters shall be used to calculate emissions. It should be noted that the benzene, toluene, ethyl benzene and xylene (BTEX) composition of the wet gas used in this analysis is much lower (only benzene and toluene detected) than the BTEX levels used to set the permit limits. Finally, the source used the inlet gas temperature of 80 º F which was used in the GLYCalc runs to set the permit limits, however, actual data recorded for GLYCalc input parameters indicated that the average inlet gas temperature is lower than 80 º F, therefore, the Division re-ran the GLYCalc evaluations using the average actual inlet gas temperature. Based on the revised GLYCalc evaluations, the HAP emissions from the facility are below the major source levels as indicated in Table 1 on page 22 of this document.

It should be noted that the GLYCalc evaluations are sensitive to certain operating parameters, specifically inlet gas temperature, glycol circulation rate and the BTEX composition of the gas. The source used the maximum glycol circulation rate in their evaluation. The other parameters used in the analysis were based on actual recorded data, which is allowed by the NGTS MACT. It should be noted that an increase in the BTEX composition of the gas and/or lower inlet gas temperatures could be sufficient to make the source a major source for HAPS.

Case-by-Case MACT - 112(j) (40 CFR Part 63 Subpart B §§ 63.50 thru 63.56)

Under the federal Clean Air Act (the Act), EPA is charged with promulgating maximum achievable control technology (MACT) standards for major sources of hazardous air pollutants (HAPs) in various source categories by certain dates. Section 112(j) of the Act requires that permitting authorities develop a case-by-case MACT for any major sources of HAPs in source categories for which EPA failed to promulgate a MACT standard by May 15, 2002. These provisions are commonly referred to as the “MACT hammer”.

Owner or operators that could reasonably determine that they are a major source of HAPs which includes one or more stationary sources included in the source category or subcategory for which the EPA failed to promulgate a MACT standard by the section 112(j) deadline were required to submit a Part 1 application to revise the operating permit by May 15, 2002. The source did submit a Part 1 application to the Division prior to May 15, 2002. It should be noted that the Part I application indicates that major source status is based on considering HAP PTE for the dehydrators based on traditional PTE (i.e. design rate and/or permitted emissions), not the procedures provided in the Natural Gas Transmission and Storage MACT. Since the EPA has signed off on final rules for all of the source categories which were not promulgated by the deadline, the case-by-case MACT provisions in 112(j) no longer apply.

RICE MACT (40 CFR Part 63 Subpart ZZZZ)

The proposed RICE MACT (40 CFR Part 63 Subpart ZZZZ) did not allow the source to base HAP PTE from the dehydrators on the "maximum" natural gas processing rate as allowed by the NGTS and ONGP MACTs; therefore, the source had initially indicated that the facility was a major source for HAPS under the 112(j) notification. However, the final RICE MACT does allow HAP emissions from the dehydrators to be based on the "maximum" natural gas throughput rate as provided for in the NGTS and ONGP MACTs. In addition, the major source definition in the RICE MACT includes facility definitions for ONGP NGTS facilities in the same manner as those respective MACTS. Therefore, as discussed above, Units S001 and S009 are aggregated separately from the other equipment and are clearly a minor source for HAPS. Therefore, the RICE MACT requirements do not apply.

Regarding the rest of the equipment, as discussed above, the Division considers that the NGTS facility is also a minor source for HAPS. Therefore, the RICE MACT provisions do not apply.

Industrial, Commercial and Institutional Boilers and Process Heaters MACT (40 CFR Part 63 Subpart DDDDD)

Unlike the RICE MACT, the MACT for industrial, commercial and institutional boilers and process heaters, does not allow for sources to use the provisions in the ONGP and NGTS MACTs to determine HAP emissions from the glycol dehydrators; although the definition of major source in consistent with the major source definition in the ONGP MACT, so presumably units S001 and S009 are a separate facility for purposes of MACT applicability review. Under that assumption, S001 and S009 are a minor source for HAPS; but the rest of the facility is considered a major source for HAPS. Although 40 CFR Part 63 Subpart DDDDD applies, existing (constructed before January 13, 2003) small gaseous fired units are not subject to any of the requirements in 40 CFR Part 63 Subparts A and DDDDD, including the initial notification requirements (§ 63.7506(c)(3)).

Organic Liquid Distribution (Non-Gasoline) MACT (40 CFR Part 63 Subpart EEEE)

Under 40 CFR Part 63 Subpart EEE §§ 63.2334(c)(1) and (2), organic liquid distribution operations do not include activities and equipment at ONGP and NGTS facilities; therefore, the organic liquid distribution MACT requirements do not apply.

Compliance Assurance Monitoring (CAM) Requirements

One glycol dehydrator is equipped with a condenser and three engines are equipped with NSCR, therefore the Compliance Assurance Monitoring (CAM) requirements potentially apply to the dehydrator and the engines.

NSCR was installed on engines S002 – S004 due to potential compliance problems with the NO_X PSD limit and the CO synthetic minor emission limit. Since NSCR is required to comply with the NO_X and CO emissions limits and potential uncontrolled NO_X and CO emissions from each engine is over the major source level (100 tons/yr), the engines are subject to the CAM requirements.

The central glycol dehydrator (S008) is equipped with a glycol-cooled condenser in order to comply with its VOC emission limit. Since uncontrolled VOC emissions from this unit (based on the 7/21/99 worst-case analysis used to set the permit limits) are over the major source level (100 tons/yr), the glycol dehydrator is subject to the CAM requirements.

The summary of emissions that was presented in the Technical Review Document (TRD) for the original permit issuance has been modified to more appropriately identify the potential to emit (PTE) since three of the engines have been equipped with control devices to reduce NO_X and CO emissions. In should be noted that with the addition of control equipment, the facility is no longer a major stationary source for prevention of significant deterioration (PSD) review requirements. Emissions (in tons/yr) at the facility are as follows:

Emission Unit	Potential to Emit (tons/yr)			
	NO_X	CO	VOC	HAPS
E001	15.9	29.5	6.4	See Table 2 on Page 23
E002 – E004	116	116	4.5	
E005	21.7	56.5	13	
East Dehy (S006)			10.2	
West Dehy (S007)			10.2	
Central Dehy (S008)			37.9	
Field Dehy (S009)			38	
Fugitive VOCs			60	
Total	153.6	202	180.2	54.60

The criteria pollutant PTE for the engines, dehydrators and fugitive VOCs is based on permitted and/or requested emissions. Even though actual emissions are typically much less than permitted emissions, the source usually reports permitted emissions as actual emissions, which is an acceptable practice; therefore actual emissions are not shown in the above table.

The breakdown of HAP emissions by emission unit and individual HAP is provided on Table 2 (page 23) of this document. As indicated in the table footnotes, the HAP PTE was determined as follows: for the glycol dehydrators it is based on the GLYCalc run submitted to set permitted emissions; for fugitive VOC emissions it is based on permitted VOC emissions multiplied by the highest weight percent of HAP (as indicated in the wet gas analyses used in the GLYCalc runs for the dehydrators); and for the

engines it is based on design rate, permitted annual hours of operation (or 8760 hrs/yr) and the most conservative emission factor from AP-42 or HAPCalc 2.0.

III. Discussion of Modifications Made

Source Requested Modifications

Prior to submittal of the renewal application on July 2, 2002, the source submitted a request to change the responsible official and add a secondary responsible official on May 3, 2001. In addition, the source indicated in a letter received June 15, 2001 that due to repairs made on one engine (S002) the serial number has changed and requested that the serial number be changed in the permit.

The source submitted their renewal application on July 2, 2002. In addition, the source submitted additional information to supplement the renewal application on November 20, 2002, April 21, 2003, and March 5, 2004. Therefore, all of the above information was addressed in the renewal application as follows:

Page following cover page

In their May 3, 2001 submittal, CIG requested that a primary and secondary Responsible Official be identified in the permit for more flexibility in completing the required certifications. The Division will grant this request. However, CIG should be aware that whichever Responsible Official signs the documents, that person becomes the responsible party regarding any non-compliance situation related to the Operating Permit and is subject to both civil and criminal penalties that may be associated with non-compliance situations. In addition, the permit contact was changed.

Page Following Cover Page and Section I, Condition 1.1

In their renewal application (July 2, 2002), the source requested that the legal description of the facility be corrected. The current permit lists Sections 5 and 8. The facility is located on Section 5 but the storage field wells and associated tank batteries are located in Section 8. The change was made as requested.

In their April 21, 2003 submittal, the source requested that the semi-annual reports and annual compliance periods follow a calendar year (i.e. the annual compliance certification would be due on February 1 of each year). The Division will make this change prior to issuance. It should noted that based on the issuance date of the renewal permit, the first semi-annual monitoring period and annual compliance period may be short (i.e. less than 6 months and 1 year, respectively).

Section I, Condition 6.1 and Tables in Appendices B and C

In a June 15, 2001 submittal, the source indicated that Unit S002 had undergone some recent repairs. This letter indicated that the upper block, crankshaft and bedplate were

replaced as needed. The upper block has a new serial number of 30364. Therefore, the Division included the new serial number in the Table in Condition 6.1 and the Tables in Appendices B and C. However, in their comments on the draft permit received on August 2, 2004, the source indicated that the serial number for S002 should be 278739. It is not clear whether the repairs made in the June 15, 2001 letter were never made or whether the serial number had never actually changed, since the source was unresponsive to the Division's requests to address this apparent discrepancy. In their October 4, 2005 additional information submittal the source confirmed that the repairs were made and = serial number of the engine is 30364.

Section II, Conditions 1.3, 2.3 and 3.3

In the renewal application (July 2, 2002), the source requested that the permit be revised to allow for alternative methods to determine the Btu content of the fuel. The source requested that the Division allow the following options: sampling, recent chromatograph result of the average of the two most recent semi-annual LHV fuel results. In their April 21, 2003 submittal, the source requested that the requirement to determine the Btu content of the fuel be revised to the language in the operating permit for CIG's Cheyenne Station. The change will be made as requested in the April 21, 2003 submittal.

Section II.2

The renewal application (July 2, 2002) requested changes to the NO_X emission limits and emission factors, changes to the portable monitoring language to address the fact that not all three engines can run at 8760 hrs/yr, and to include the operation of air-to-fuel ratio controllers on these engines. Since the renewal application was submitted, control devices have been added to the engines. Therefore, the requested changes in the renewal application are no longer relevant and won't be included in the renewal permit. The source submitted a supplement to the renewal application on March 5, 2004 addressing the control devices and other requirements on these engines based on the Compliance Order on Consent (signed February 17, 2004). These provisions include revised emission factors, hours of operation on each engine and revised emission limits. These changes will be addressed as follows:

- Install non-selective catalytic reduction (NSCR) controls on engines S002 thru S004 before December 1, 2003 (Compliance Order On Consent, No. 2002-093, February 17, 2004, Section III.9).

  In their March 5, 2004 letter, the source indicated that the NSCR controls were installed on the engines prior to December 1, 2003. The permit will not include the requirement to install the catalysts but will require that the engines not be operated without the catalysts and will include appropriate monitoring requirements for the catalysts.

- Hours of operation shall be limited to 6,800 hrs/yr for each engine, based on a rolling twelve month total, except as provided below (Compliance Order On Consent, No. 2002-093, February 17, 2004, Section III.9).

- If any of the engines cannot be operated, one or both of the remaining two engines may be operated in excess of 6800 hrs/yr, however, the total operating hours for all three engines shall not exceed 20,400 hrs/yr, based on a rolling twelve month total (Compliance Order On Consent, No. 2002-093, February 17, 2004, Section III.9).

- The hours of operation limitations apply from the period of December 1, 2003 until December 1, 2006 (Compliance Order On Consent, No. 2002-093, February 17, 2004, Section III.9).

- Within thirty (30) calendar days of the effective date of the consent order, the source shall submit an application to modify its renewal application to reflect the following: 1) installation of the catalysts required in Section III.9 of the consent order, 2) incorporation of new emission factors for engines S002, S003, and S004 of 3.5 g/hp-hr for NO_X and CO, and 3) an increase in the hours of operation limits consistent with the limits in Section III.9 of the consent order.

  The source submitted revisions to their renewal application on March 5, 2004 indicating the requested hours of operation for the engines, as indicated in Section III.9 of the Compliance Order on Consent (COC) and the new emission factors for NO_X and CO, as indicated in Section III.10 of the COC. In addition, the source also requested revised emission and fuel consumption limits based on the new NO_X and CO emission factors and the limits on hours of operation. The Division will include the hours of operation limit, the revised NO_X and CO emission factors and the revised emission and fuel consumption limits in the revised permit.

  In their March 5, 2004 request, the source converted the COC emission factors (in g/hp-hr) to emission factors in units of lbs/mmBtu using the following equation:

  $$EF\ (lbs/mmBtu) = \frac{EF\ (g/hp\text{-}hr) \times 10^6\ Btu/mmBtu}{Design\ engine\ heat\ rate\ (Btu/hp\text{-}hr) \times 453.6\ g/lb}$$

  The converted emission factors (0.98 lbs/mmBtu for both NO_X and CO) are based on an engine design heat rate of 7844 Btu/hp-hr.

  The new requested emission limits and fuel consumption limits, as requested on the APEN received March 5, 2004, are as follows:

NO_X	116 tons/yr
CO	116 tons/yr

  Note that requested emissions are for all engines combined.

Fuel consumption 56.533 mmSCF/yr per engine

In an APEN submitted on August 2, 2004, with their comments on the draft permit, the source requested a fuel consumption limit of 75.1 mmSCF/yr per engine (a total fuel consumption limit of 225.3 mmSCF/yr for all engines together). Since the COC includes requirements on the hours per year each engine can operate, the Division considers that it is not necessary to include individual fuel consumption limits for each engine. Therefore, a combined fuel consumption limit for all engines together will be included in the permit. This limit will provide more flexibility when the hours of operation limits set by the COC no longer apply.

It should be noted that the hours of operation requirements in the COC expire on December 1, 2006 and this will be indicated in the permit. However, permitted emissions are based on the hours of operation limitation and the source will need to revise the permit after December 1, 2006 in order to operate the engines above the hours of operation limits indicated in the COC and the permit.

In their October 4, 2005 additional information submittal, the source requested that the VOC emissions for these engines be increased to 6.6 tons/yr, which allows for the increase hours of operation. The Division revised the August 2, 2004 APEN

- Between the effective date of the consent order and the installation date of the catalysts, the source shall utilize a 4.0 lbs/mmBtu CO emission factor and shall continue with the 225 tons/yr limit set forth in the current permit (Compliance Order On Consent, No. 2002-093, February 17, 2004, Section III.10).

  Since the engines are equipped with the catalysts, it is not necessary to include the above requirement, as it no longer applies.

Section II, Conditions 4.1.3 and 5.1.3

The renewal application (July 2, 2002) requested that the requirement to conduct an extended gas analysis no less than two months apart be relaxed to no less than one month apart. The source has requested this change in order to have the ability to take two samples during the withdrawal period as required by the permit. This change will be made as requested.

Section II, Condition 5.1.4

The renewal application (July 2, 2002) requested that the current permit be revised to allow a monthly average condenser temperature to be used to trigger a GLYCalc run. The change will be made as requested.

Unit S008 CAM Plan Review

This unit was equipped with a condenser when initially permitted in 1997; however, the control device was never specifically addressed in the construction permit or in the original Title V permit (issued 10/1/98). During the processing of the 9/19/00 modification to the Title V operating permit, the Division specifically identified the condenser in the revised Title V operating permit and included monitoring for the condenser outlet temperature. During an inspection following the issuance of the revised Title V operating permit, it became apparent that the source could not keep the existing condenser outlet temperature at the level used to set the permit limits. Therefore, the condenser was replaced with glycol-cooled condenser. The condenser is necessary for the source to meet their permitted VOC emission limit. Based on the worst-case GlyCalc evaluation used to set the permit limits, uncontrolled VOC emissions from this unit are 119 tons/yr. Therefore, since the uncontrolled potential to emit exceeds the major source level for VOC, CAM applies to this unit.

The source submitted a CAM plan for the glycol dehydrator on November 20, 2002 at the request of the Division. The source proposed to monitor the condenser outlet temperature as an indicator parameter. The Division agrees with the condenser outlet temperature is an appropriate indicator for the condenser.

The CAM plan indicated that the condenser outlet temperature will be monitored and recorded once per day and that the data collection procedures used will be either computerized data acquisition or manual log entries. In an April 5, 2004 e-mail the source indicated that the recording method was manual.

The high temperature indicated in the CAM plan submitted by the source is 100 º F. The justification for this temperature is that the condenser is designed to not exceed 100 ºF. No minimum temperature was identified. The source indicated that temperatures below 100 º F will not prevent the condenser from operating properly. The Division agrees, since at lower temperatures more VOC would condense, therefore, no minimum temperature is necessary. In addition, the source indicated that the glycol-cooled condenser is insulated and the glycol mixture is not prone to freezing. Therefore, the Division considers that a low temperature range is not necessary for optimal operation of the unit.

Section II, Condition 6.1.3

The renewal application (July 2, 2002) requested that the current permit be revised to provide a fixed semi-annual period to conduct extended gas analyses. The source considers that a fixed schedule is less complicated than the current schedule, which specifies more or less sampling depending on the results of the analyses. The change will be made as requested.

Section II.6

In their April 21, 2003 submittal the source submitted a new "worst" case analysis for the glycol dehydrator (S009) and a higher VOC emission limit. The revised VOC emission limits and criteria for the new "worst" case analysis have been included in the permit as requested. The source submitted an APEN to increase VOC emissions from this unit on August 2, 2004.

Other Modifications

In addition to the modifications requested by the source, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal.

The Division has made the following revisions, based on recent internal permit processing decisions and EPA comments, to the Flank Renewal Operating Permit with the source's requested modifications. These changes are as follows:

Page following Cover Page

- The citation (above "issued to" and "plant site location") on the page following the cover page provides the incorrect title for the state act. The title will be changed from "Colorado Air Quality Control Act" to "Colorado Air Pollution Prevention and Control Act". In addition, the dates were removed from the citation.

- Added language specifying that the semi-annual reports and compliance certifications are due in the Division's office and that postmarks cannot be used for purposes of determining the timely receipt of such reports/certifications.

General

- The Reg 3 citations were revised throughout the permit, as necessary, based on the recent revisions made to Reg 3.

Section I – General Activities and Summary

- Revised the language in Condition 1.3 to identify two Compliance Orders on Consent (COC) as a source of applicable requirements.

- Removed permit 95BA518-3 from Condition 1.3. This construction permit was issued for Unit S009 on 5/12/97. The source indicated that the dehydrator was replaced in September 1998. When a unit is replaced, the construction permit is typically cancelled and a new construction permit issued. The Division processed this mod directly in the September 19, 2000 revised Title V permit, so

no new construction permit was issued. However, the Division failed to cancel the construction permit for the previous unit and we are doing so in this renewal permit.

- Conditions 13 and 17 in Condition 1.4 were renumbered to 14 and 18 and Condition 21 in Condition 1.5 was renumbered to 22. The renumbering changes were necessary due to the addition of the Common Provisions requirements in the General Conditions of the permit.

- In Condition 1.4, General Condition 3.g (new general condition for general provisions) was added as a State-only requirement.

- Based on comments made by EPA on another operating permit, the phrase "Based on the information provided by the applicant" was added to the beginning of Condition 4.1 (112(r)).

- Revised the Table in Condition 6.1 to include the water-heating boiler and to correct the AIRS ID numbers for Units S008 and S009.

- Condition 5 (MACT notification) was revised. Since the source is a minor source for HAPS based on the special provisions for calculating the HAP PTE for the dehydrators in the Natural Gas Storage and Transmission MACT (40 CFR Part 63 Subpart HHH), the Division added requirements to re-calculate the HAP PTE in the event that the natural gas throughput rate increases.

- Added a "new" Section 6 for compliance assurance monitoring (CAM), note that Unit S008 (glycol dehydrator) and Units S002 thru S004 (engines) are all subject to CAM.

<u>Section II.1 & 3 – Internal Combustion Engines</u>

- The portable monitoring language was moved to "new" condition 8, so that the language does not have to be repeated numerous times. The portable monitoring language was updated to the current language, which requires that the portable monitoring conducted verify the emission factors in the permit.

- Revised the language in Conditions 1.1 and 3.1 (for calculating emissions) based on changes to the portable monitoring language. In addition, revised the equations to calculate emissions in "tons/mo" rather than "lbs/mo".

- Added language to Conditions 1.2 and 3.2 to indicate that fuel use is determined with a facility fuel meter and fuel is allocated based on engine size and hours of operation.

- Under "monitoring method" in the Table for Conditions 1.3 and 3.3, replaced "As Defined" with "ASTM Methods or In-Line Gas Chromatograph".

- The language specifying the 20% opacity requirement (Conditions 1.4 and 3.4) was rewritten to more closely resemble the language in Regulation No. 1.

- In the Table for Conditions 1.4 and 3.4, placed "Fuel Restriction" under "Monitoring Method" and under "Monitoring Interval" added "whenever natural gas is used as fuel".

Note that no condition is included for the 30% opacity standard, which is applicable during certain operating activities. The specific activities under which the 30% opacity standard applies are: building a new fire, cleaning of fire boxes, soot blowing, startup, any process modification, or adjustment or occasional cleaning of control equipment. Based on engineering judgment the Division considers that building a new fire, cleaning of fire boxes and soot-blowing does not apply to the operation of internal combustion engines. In addition, these engines do not have control devices, so adjustment or occasional cleaning of control devices do not apply to these engines. Process modifications and startup may apply to engines, however, based on engineering judgment, the Division believes that such activities would be unlikely to occur for longer than six minutes. Therefore, the 30% opacity requirement has not been included in the operating permit.

Section II.2 – Engines Equipped with NSCR

- The portable monitoring language was moved to "new" condition 8, so that the language does not have to be repeated numerous times. The portable monitoring language was updated to the current language, which requires that the portable monitoring conducted verify the emission factors in the permit.

- Revised the language in Condition 2.1 (for calculating emissions) based on changes to the portable monitoring language. In addition, revised the equations to calculate emissions in "tons/mo" rather than "lbs/mo".

- Added language to Condition 2.2 to indicate that fuel use is determined with a facility fuel meter and fuel is allocated based on engine size and hours of operation.

- Under "monitoring method" in the Table for Condition 2.3, replaced "As Defined" with "ASTM Methods or In-Line Gas Chromatograph".

- The language specifying the 20% opacity requirement (Condition 2.5) was rewritten to more closely resemble the language in Regulation No. 1.

- In the Table for Condition 2.5, placed "Fuel Restriction" under "Monitoring Method" and under "Monitoring Interval" added "whenever natural gas is used as fuel".

Note that no condition is included for the 30% opacity standard, which is applicable during certain operating activities. The specific activities under which the 30%

opacity standard applies are: building a new fire, cleaning of fire boxes, soot blowing, startup, any process modification, or adjustment or occasional cleaning of control equipment. Based on engineering judgment the Division considers that building a new fire, cleaning of fire boxes and soot-blowing does not apply to the operation of internal combustion engines. In addition, although these engines have control devices, the purpose of the control device is not to reduce particulate matter emissions, so adjustment or occasional cleaning of control devices do not apply to these engines. Process modifications and startup may apply to engines, however, based on engineering judgment, the Division believes that such activities would be unlikely to occur for longer than six minutes. Therefore, the 30% opacity requirement has not been included in the operating permit.

CAM Plan

The source installed non-selective catalytic reduction units (catalysts) on the engines in order to resolve non-compliance issues regarding the NO_X BACT limit and the synthetic minor CO limit. The source submitted additional information on March 5, 2004 to address the catalysts, however, no CAM plan was submitted. Uncontrolled emissions from each engine are above the major source level (both NO_X and CO = 110 tons/yr). Uncontrolled emissions are based on the emission factors in the current operating permit, maximum hourly heat input rate and 6,800 hrs/yr of operation. Therefore, since the uncontrolled potential to emit of each engine exceeds the major source level for NO_X and CO, CAM applies to these engines. Since a CAM plan was not submitted for these engines the Division is including what it considers to be acceptable CAM for these engines in the draft permit and the source may comment on the plan during the pre-public comment review and public comment periods.

The final MACT standards for reciprocating internal combustion engines (RICE) were published in the Federal Register on June 15, 2004. The CAM rule specifies that presumptively acceptable monitoring includes monitoring required for any standards that are exempt from CAM (i.e. MACT standards), provided the monitoring is applicable to the control device. Since the RICE MACT includes monitoring requirements for 4-cycle rich burn engines equipped with non-selective catalytic reduction the Division believes that the monitoring in the RICE MACT is applicable and should be used as the basis for CAM for these engines.

The final RICE MACT requires continuous monitoring of inlet catalyst temperature (engine exhaust), monitoring the pressure drop across the catalyst monthly and semi-annual performance tests. Since the engines are small pollutant specific emission units, the frequency of required monitoring is daily in accordance with the provisions in 40 CFR Part 64 § 64.3(b)(4)(iii). Based on the information submitted in their comments on the draft permit (received August 2, 2004), it appears that the catalyst inlet temperature is monitored continuously and is equipped with an alarm, which will sound when the temperature is outside of the indicator range. In order for the Division to review historic temperature data, the CAM plan will specify daily

recording of temperature. An excursion will be any time the alarm sounds or a recorded temperature is outside of the indicator range.

In addition the RICE MACT requires recording of the pressure drop across the catalyst monthly; therefore, this will also be included as an indicator in the CAM plan.

It should be noted that the Division intends to set the indicator ranges based on the requirements that are in the RICE MACT. Therefore the indicator range for the inlet catalyst temperature is greater than or equal to 750 º F and less than or equal to 1250 º F. For the pressure drop across the catalyst, the indicator range will be based on values recorded during the initial performance test. Therefore a performance test will be required to set the pressure drop. It should be noted that the CAM requirements do not specifically require testing to set the indicator ranges, therefore, if the source can justify an appropriate range based on manufacturer's data or engineering calculations, the Division will consider that information. The Division considers that the permit would not need to be re-noticed if the source submits manufacturer's information to set the indicator range since the CAM requirements do not require testing to set the range and the purpose of the performance test is to set the indicator range.

The Division has developed monitoring requirements for engines equipped with control devices (see attached) and for rich burn engines equipped with catalysts, the Division requires quarterly portable monitoring for NO_X and CO emissions, recording of the air-to-fuel ratio (AFR) controller setting and determining the oxygen concentration in the exhaust. These requirements will be included as periodic monitoring and not specifically as CAM requirements. Note that quarterly portable monitoring was required for these engines when they did not have catalysts. Therefore, the Division considers it appropriate for the portable monitoring to remain as periodic monitoring. Recording the AFR setting and determining the oxygen concentration are new requirements due to the addition of the catalyst. Recording of the AFR setting will be monthly and the oxygen concentration in the engine exhaust will be determined during the portable monitoring tests.

<u>Sections II.4 thru II.6 – Glycol Dehydrators General Changes</u>

- A newer version of GlyCalc is now available. The permit will be written to require that GlyCalc version 4.0 or higher shall be used to calculate emissions.

- In Conditions 4.1, 5.1 and 6.1 in the Table under "Monitoring Method" replaced EPA Reference Methods" with "ASTM Methods".

- When a GlyCalc run is triggered, the current permit requires the permittee to re-calculate the twelve month rolling total (Conditions 4.1.5, 5.1.5 and 6.1.5). For months in which a GlyCalc run is not triggered, the permittee is required to calculate monthly emissions by multiplying the lbs/day predicted by the "worst case" GlyCalc run by the number of days the unit operated. Since the unit may not operate for the full 24 hours in the day, this method gives overly conservative

results. Therefore, the Division has revised these conditions to require that the permittee multiply the lbs/hr predicted by the "worst case" GlyCalc run by the number of hours the unit operated. This is consistent with the calculation methodology in the renewal permits issued for Vilas and Ft. Morgan.

- Revised Condition 6.3 to require the source to record hours of operation, rather than days of operation for the reasons discussed in the above bulleted item.

Section II.5 – Unit S008 – Glycol Dehydrator

- In the processing of the current permit (9/19/00 modification), the Division had noted that this unit was equipped with a flash tank and that emissions from the flash tank were not included in the permitted emissions. During the processing of that modification, the source indicated that emissions from the flash tank are routed to the reboiler for use as fuel. In order to clarify this, the Division added a statement to the table of emission units in Section I, Condition 6.1 indicating that flash tank emissions were routed to the reboiler. Since emissions from the flash tank would be enough to put emissions from this unit over the significance levels (as discussed in the technical review document for the 9/19/00 modification), the Division believes it is more appropriate to put a condition in Section II.5 of the permit, requiring that emissions from the flash tank be routed to the reboiler. Therefore, such a condition has been added in the renewal permit.

- A November 14, 2000 Division inspection revealed some non-compliance issues related to this unit, which resulted in a COC (signed August 30, 2002). In general, the COC required that the existing condenser be replaced with a glycol cooled condenser. The Division has included the following applicable requirements from the COC into the renewal permit:

    - CIG has installed and shall continue to operate the glycol-cooled condenser on the Olman Heath Triethylene Glycol Dehydrator (S008) (Compliance Order on Consent, dated August 30, 2002, paragraph IV.23).

    - CIG has installed and shall continue to operate the automatic fan cut-off on equipment upstream of the gas-glycol contact tower. The automatic fan cut-off equipment is designed to prevent the over-cooling of the gas stream. If the equipment fails to prevent the over-cooling of the gas, CIG shall immediately notify the Division in writing with a proposal and implementation schedule for the taking of other measures to prevent the over-cooling of the gas (Compliance Order on Consent, dated August 30, 2002, paragraph IV.24).

Units S008 and S009 Construction Permit Issues

In their original Title V permit application (submitted 2/1/95), the source indicated that the Field Dehydrator (Unit S009) was permitted under C12,485-5 and they requested that the permit be revised to address the VOC emissions from the still vent. The

installation and history of unit S009 is discussed in more detail in this document under "Section II.10 – Additional EPA PSD Permit Requirements". Unit S008 (the Central Dehydrator) was installed after unit S009 and no permit was issued for Unit S008 since the reboiler was exempt from permitting and the Division was unaware that VOC emissions from the still vent were significant. The source submitted APENs for unit S008 and the other glycol dehydrators in June 1995. Construction permits were issued for the glycol dehydrators on May 12, 1997. However, unit S008 was addressed on construction permit 12BA485-5, as a final approval, modification No.1 and unit S009 was addressed on an initial approval construction permit (95BA518-3). Unit S009 was the first dehydrator installed and the reboiler for Unit S009 was addressed in construction permit 12BA485-5 (formerly C12,485-5) and therefore VOC emissions for this unit should have been addressed on 12BA485-5. The Division apparently mixed up the permit numbers for these units. In the September 19, 2000 revised Title V permit, the Division included the construction permit numbers in the citations and 12BA485-5 was cited for S008 and 95BA518-3 was cited for S009. In order to attempt to reduce the confusion, the Division will not revise the underlying construction permit number for S008. Note that in the AIRS point number for S008 was corrected in the table in Section II, Condition 6.1.

When an emission unit is replaced generally the point number in AIRS and the permit are canceled and a new permit number and AIRS point number are assigned. The September 19, 2000 revised Title V permit addressed a replacement for Unit S009. However, in the revised Title V permit, the AIRS point number was not changed (emission table in Section I, Condition 6.1) and the construction permit number cited in Section II.6 was 95BA518-3. In order to be consistent with our general practice a new AIRS point number and construction permit number should have been assigned. Therefore, we corrected the AIRS point number in the emission unit table in Section I, Condition 6.1 and since no construction permit was issued for the replacement (it was processed as a combined construction/operating permit), the citations were revised to reflect this.

Section II.7 – Fugitive VOC Emissions from Equipment Leaks

- The equation in Condition 7.1 to calculate VOC emissions was revised to indicate that the weight percent VOC shall be used to calculate emissions. Since the emission factors are in lbs/hr, it is appropriate to use weight percent VOC.

- Revised Condition 7.1 to provide more specific requirements on conducting the component count and maintaining records of the existing count. The language specifies that the initial count shall occur within one (1) year of renewal permit issuance. In addition, the language specifying that the component count shall be conducted every five years shall remain in the permit.

- Revised the language in Condition 7.1 to more specifically identify the permit condition numbers for the gas analyses.

- Added language to Condition 7.2 to require that the Maintenance Plan be implemented.

Section II.10 – Additional EPA PSD Permit Requirements

The EPA PSD permit issued on March 31, 1980 included NO_X limits for engines S002 through S004 and these limits were included in the original Title V permit and will remain in the permit. However, the EPA PSD permit also included NO_X limits for a water heating boiler and a glycol reboiler. These limits were not included in the original Title V permit application, most likely because the Division considers these emission units exempt from APEN reporting and construction permit requirements and also insignificant activities for purposes of Title V permitting. However, based on EPA comments on another Title V permit, the Division cannot revise an EPA PSD permit, unless there is a major modification to that equipment and PSD review requirements are triggered. Therefore, it was not appropriate for the Division to disregard the NO_X limits in the PSD permit for the glycol dehydrator reboiler and water heating boiler and so the Division has included these limits in the renewal permit as discussed below:

Glycol Reboiler

The EPA PSD permit includes a NO_X limit of 0.26 lbs/hr for the glycol dehydrator reboiler and the permit does not specify the size of the reboiler. The preliminary analysis for the EPA PSD permit indicates that the reboiler is rated at 2.0 mmBtu/hr and it appears that emissions were based on an emission factor of 121 lb/mmSCF. The Division issued initial approval construction permits for the equipment for which the EPA PSD permit addressed (engines S002 – S004, the glycol reboiler and the water heating boiler). A construction permit application was submitted to the Division on May 17, 1979 and the APEN indicated that the reboiler was rated at 2 mmBtu/hr. The initial approval construction permit (C12,485-5) for the reboiler was issued 8/9/79 and the permit did not specify the size of the reboiler. The Division received a letter from the source on February 9, 1982 indicating that they were "planning to replace the small, temporary dehydration units currently in place at Flank with a single, central dehydration unit." The reboiler for the replacement unit would be rated at 1.5 mmBtu/hr and the source submitted an APEN for the replacement unit. A final approval permit was issued on May 1, 1985 and the final approval permit indicated that the reboiler was 1.5 mmBtu/hr. It is not clear whether the source ever notified EPA of this change; however, emissions from the reboiler itself would have been well below the significance level for all pollutants and PSD review would not have been required. Since the reboiler addressed in the original EPA PSD permit was replaced, the NO_X limits for the reboiler in the EPA PSD permit no longer apply and will not be included in the renewal permit.

Note that at the time the reboiler was replaced, neither the Division nor the EPA were aware that VOC emissions from the still vents of glycol dehydrators could be significant. When the original Title V permit application was submitted the source addressed VOC emissions from the still vent and permitted VOC emissions were below the PSD significance levels. Note that this dehydrator was replaced in its entirety in 1998 and this change was addressed in the September 19, 2000 revision to the Title V permit.

Water-Heating Boiler

The EPA PSD permit includes a NO_X limit of 0.19 lb/hr for the water-heating boiler. As discussed above for the glycol dehydrator boiler, the permit does not indicate the size of the boiler, but the preliminary analysis indicates the boiler is rated at 1.5 mmBtu/hr and the emissions are based on an emission factor of 118 lb/mmSCF. An initial approval construction permit (C12,485-4) was issued for this unit on 8/9/79 and a final approval permit was issued on 5/1/85. The final approval permit contained hourly and annual emission and fuel consumption limits, as well as Reg 1 opacity and Reg 6, Part B fuel burning requirements. In their Title V permit application submitted on February 1, 1995, the source included the water-heating boiler in the insignificant activity list. Since the boiler capacity is less than 5 mmBtu/hr and burns gaseous fuel it is exempt from APEN reporting (Reg 3, Part A, Section III.D.1.k), construction permit requirements (Reg 3, Part B, Section III.D.1.a) and is an insignificant activity (Reg 3, Part C, Section II.E.3.k). The Division included the boiler in the insignificant activity list and the construction permit was cancelled for the boiler. However, since the boiler is subject to an emission limit from an EPA PSD permit, the Division will include the boiler in Section II of the permit. Note that because of this unit's small size and insignificant emissions, the Division will not require an APEN for this unit and will still consider the construction permit cancelled for this unit. The only applicable requirements that will be included in the renewal permit is the EPA PSD permit NO_X limit.

Note that based on an AP-42 NO_X emission factor of 100 lb/mmSCF (Section 1.4, Table 1.4-1, dated 3/98 (for boilers < 100 mmBtu/hr), in the absence of credible evidence to the contrary, compliance with the EPA PSD permit limit is presumed, provided the heat content of the gas is not less than 789.5 mmBtu/SCF.

Section III – Permit Shield

- The citation in the permit shield was corrected. The reference to Part A, Section I.B.43 was changed to Part A, Section I.B.44 and the reference to Part C, Section XIII was changed to Part C, Section XIII.B.

- Based on comments made by EPA on another permit, the following phrase was added to the beginning of the introductory sentence in Section 1 "Based upon the information available to the Division and supplied by the applicant".

- Based on comments made by EPA on another permit, the following statements were added after the introductory sentence in Section 1 "This shield does not protect the source from any violations that occurred prior to or at the time of permit issuance. In addition, this shield does not protect the source from any violations that occur as a result of any modification or reconstruction on which construction commenced prior to permit issuance."

- Based on comments made by EPA on another permit, the phrases regarding reconstruction or modification under the shield for NSPS K, Ka and Kb were

removed. It is EPA's opinion that the Division may not have all of the information available to determine whether a reconstruction or modification has occurred and as a result the justification should not address modifications or reconstructions.

Section IV - General Conditions

- Added an "and" between the Reg 3 and C.R.S. citations in General Condition 3 (compliance requirements).

- Added language from the Common Provisions (new condition 3). With this change the reference to "21.d" in Condition 20 (prompt deviation reporting) will be changed to "22.d", since the general conditions are renumbered with the addition of the Common Provisions.

- Removed the upset and breakdown provisions from Condition 4 (emergency provisions) since they are included in the Common Provisions.

- The citation in General Condition 7 (fees) was changed to cite the Colorado Revised Statue. In addition, any specific identification of a fee (i.e. $100 APEN fee) or citation of Reg 3 was removed and replaced with the language "…in accordance with the provisions of C.R.S. [appropriate citation]."

- The phrase "Part A" was added to the citation for Condition 13 (odor). Colorado Regulation No. 2 was revised and a Part B was added to address swine operations. Colorado Regulation No. 2, Part B should not be included as a general condition in the operating permit.

- The citation in General Condition 16 (open burning) was revised. The open burning requirements are no longer in Reg 1 but are in new Reg 9. In addition, changed the reference in the text from "Reg 1" to "Reg 9".

- Added the requirements in Colorado Regulation No. 7, Section V.B (disposal of volatile organic compounds) to General Condition 28.

Appendices

- Removed the hot water boiler (1.5 mmBtu/hr) from the insignificant activity list in Appendix A since this unit is subject to a NO_X BACT limit.

- Added side shields to the safety glasses and flame retardant clothing to the equipment list in Appendix A. These equipment changes have been requested by the source in other renewal permits.

- Appendix B and C were replaced with revised Appendices.

- The EPA addresses in Appendix D were corrected.

Table 1: HAP Emissions as Calculated in Accordance with NGTS MACT Method

HAPS per CIG MACT analysis for S006, S007 and S008, with APCD corrections, higher engine hours

	HAP Emissions (tons/yr)									
Unit	acetaldehyde	acrolein	benzene	toluene	ethyl benzene	xylene	formaldehyde	n-hexane	methanol	**total**
E001	0.22	0.16	0.04	0.21		0.01	1.83	0.03	0.07	2.57
E002 - E004 (hours limited to 20,400 hrs/yr)	0.33	0.31	0.73	0.24		0.05	3.28		0.36	5.30
E005	0.40	0.29	0.08	0.39		0.02	3.33	0.08	0.12	4.71
East Dehy (S006)			0.25	0.46				0.10		0.81
West Dehy (S007)			0.25	0.45				0.10		0.80
Central Dehy (S008)			3.75	5.14				1.54		10.43
Field Dehy (S009)			2.90	7.80	2.10	2.80		1.10		16.70
Fugitive VOCs			0.01	0.02	0.01	0.01		0.16		0.20
Total	0.95	0.76	8.01	14.71	2.11	2.89	8.44	3.11	0.55	41.52
S001/S009	0.22	0.16	2.94	8.01	2.10	2.81	1.83	1.13	0.07	19.27
Others	0.73	0.60	5.07	6.70	0.01	0.08	6.61	1.98	0.48	22.25

S001 and S009 are subject to Subpart HH, therefore, they are aggregated separately for purposes of determining MACT applicability.
The other emission units are potentially subject to Subpart HHH.
Engine emissions are based on most conservative emission factor (from AP-42 and HAPCalc 2.0, for 4-cycle rich burn engines and/or 4-cycle lean/clean burn) for each pollutant.
Note that except for S001, these are basically the same emission factors used by CIG
APCD corrections on dehy runs for S006, S007, and S008 are based on lower inlet gas temp per recorded values (average) and non-electric pumps for S006 and S007
Fugitive VOC emissions are based on permitted emission limits and the n-hexane, BTEX weight percent from wet gas analysis used in GLYCalc to set permit limits.
Since the renewal application indicates that the potential fugitive VOC emissions from equipment leaks is much less than permitted VOC emissions, this is a conservative calculation.

Table 2: Potential to Emit of HAPS

HAPS per Division Analysis

Unit	HAP Emissions (tons/yr) acetaldehyde	acrolein	benzene	toluene	ethyl benzene	xylene	formaldehyde	n-hexane	methanol	**total**
E001	0.22	0.16	0.04	0.21		0.01	1.83	0.03	0.07	2.57
E002 - E004 (hours limited to 20,400 hrs/yr)	0.33	0.31	0.73	0.24		0.05	3.28		0.36	5.30
E005	0.40	0.29	0.08	0.39		0.02	3.33	0.08	0.12	4.71
East Dehy (S006)			0.93	0.86	1.40	2.00		1.50		6.69
West Dehy (S007)			0.93	0.86	1.40	2.00		1.50		6.69
Central Dehy (S008)			6.03	1.95	1.40	1.30		1.06		11.74
Field Dehy (S009)			2.90	7.80	2.10	2.80		1.10		16.70
Fugitive VOCs			0.01	0.02	0.01	0.01		0.16		0.20
Total	0.95	0.76	11.65	12.33	6.31	8.19	8.44	5.43	0.55	54.60
S001/S009	0.22	0.16	2.94	8.01	2.10	2.81	1.83	1.13	0.07	19.27
Others	0.73	0.60	8.71	4.32	4.21	5.38	6.61	4.30	0.48	35.33

S001 and S009 are subject to Subpart HH, therefore, they are aggregated separately for purposes of determining MACT applicability.
The other emission units are potentially subject to Subpart HHH.
Engine emissions are based on most conservative emission factor (from AP-42 and HAPCalc 2.0, for 4-cycle rich burn engines and/or 4-cycle lean/clean burn) for each pollutant.
Dehy emissions from GLYCalc runs used to set permit limits.
Fugitive VOC emissions are based on permitted emission limits and the n-hexane, BTEX weight percent from wet gas analysis used in GLYCalc to set permit limits.
Since the renewal application indicates that the potential fugitive VOC emissions from equipment leaks is much less than permitted VOC emissions, this is a conservative calculation.